## CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM STATEMENT OF INVESTMENT POLICY

#### **FOR**

### BENCHMARKS MODIFICATION AND BENCHMARK DETAILS

July 1, 2011 April 11, 2011

This policy is effective immediately upon adoption and supersedes all previous Benchmark Modification policies.

#### I. PURPOSE

The <u>California Public Employees' Retirement System ("CalPERS")</u> Total Fund Statement of Investment Policy, adopted by the CalPERS Investment Committee ("Committee"), sets forth CalPERS overarching investment purposes and objectives with respect to all its investment programs.

This document sets forth the investment policy ("Policy") for the selection and modification of Program benchmarks ("Program"). The design of this Policy ensures that investors, managers, consultants, and other participants selected by the California Public Employees' Retirement System ("CalPERS") take prudent and careful action when selecting program benchmarks and managing the benchmark modification process. Additionally, use of this policy assures sufficient flexibility in managing investment risks and returns associated with managing program benchmarks.

#### II. STRATEGIC OBJECTIVE

The Program shall be managed to accomplish the following:

A.Diversify CalPERS investment programs;

- B.A. Manage total portfolio risk and return characteristics; and,
- C.B. Establish controls for the selection and modification of benchmarks.

#### III. RESPONSIBILITIES

- A. The Committee is responsible for approving total fund policy benchmarks.
- A.B. CalPERS Investment Staff ("Staff") is responsible for the following:
  - 1. All aspects of portfolio management including monitoring, analyzing, and evaluating performance relative to the appropriate benchmark.

- 2. Modifying benchmarks as applicable.
- 3. Providing a report to the Chief Operating Investment Officer ("COIO"), annually, in July, listing all new benchmark, benchmark replacement and modification requests submitted during the previous fiscal year.
- 4. Reporting to the Committee quarterly, and more often if needed, about the performance of the various program benchmarks and the any benchmark changesmodification process.
- 5. Monitoring the implementation of, and compliance with, the Policy. Staff shall report concerns, problems, material changes, and all violations of <a href="mailto:thisGuidelines and Policies">thisGuidelines and Policies</a> at the next Committee meeting, or sooner if deemed necessary. All events deemed materially important will be reported to the Board immediately. These reports shall include explanations of the violations and appropriate recommendations for corrective action.

#### **B.C.** The General Pension Consultant ("Consultant") is responsible for:

- 1. Monitoring, evaluating, and reporting quarterly, to the Committee, on the performance of the Program relative to the Policy.
- 2. Reviewing and approving all requests for benchmark replacements and modifications.

#### IV. PERFORMANCE OBJECTIVE AND BENCHMARK

- A. The performance objective is for the various asset classes and programs to meet or exceed their respective benchmarks.
- B. The benchmark for individual programs or strategies is listed in one of the following attachments:
  - 1. Attachment A: Total Fund Policy
  - Attachment B: Asset Allocation Policies
  - Attachment C: Alternative Investment Management Growth Policies
  - 4. Attachment D: Global Equity Policies
  - <u>5.4.</u> Attachment <u>ED</u>: <u>Global Fixed Income Policies</u>

- 6.5. Attachment FE: Inflation Assets-Linked Policies
- 7.6. Attachment GF: Real Assets Estate Policies
- 7. Attachment G: Liquidity Policies
- 7. Attachment H: Investment and Risk Management Policies
- 9.8. Attachment HI: Other (Non-PERF) Investment Portfolio Policies

Policies included in the following categories do not have referenced benchmarks; therefore they are not listed in the attachments: <u>Investment and Risk Management</u>, Ethics, Operations, and Shareowner Activities.

C. Benchmark Definitions – Please see the applicable attachments for a definition of each program's component (i.e., industry, sector, country, etc.) benchmark.

#### V. INVESTMENT APPROACHES AND PARAMETERS

The purpose of a benchmark is to <u>establish target investment exposures</u>, facilitate the periodic reporting to the Committee, and to provide a relative measure to gauge success.

A. Desirable Benchmark Characteristics

The desirable characteristics of a suitable program benchmark are set forth below.

- 1. Public Market Securities / Programs
  - a. Investable The securities contained in the benchmark should represent tradable positions. Ideally, the benchmark should be constructed with low turnover to minimize transactions costs.
  - b. Measurable The pricing of the benchmark should be transparent, making it possible to track benchmark performance.
  - c. Unambiguous The names and weights of the securities in the benchmark should be clearly defined.
- 2. Private Market Programs

- a. Measurable The pricing of the benchmark should be transparent, making it possible to track benchmark performance.
- b. Predetermined The names and weights of the components of the benchmark should be clearly defined.
- c. Representative The components of the benchmark should be suitably representative of the investments and their associated risk and return levels.

#### B. Benchmark Modification Indicators:

The following factors may indicate that modification of a benchmark should be considered:

- 1. When a more cost efficient alternative is available that captures the risk return characteristics of the asset class or program.
- 2. When a component (i.e., industry, sector, country, etc.) of the benchmark is exposed to economic risks that are of such a degree that the future economic viability of that industry or sector is in doubt. Examples of such indicators:
  - a. The industry, not an individual company, shares common exposure to product liability judgments, settlements, and ongoing litigation that have the potential to exceed the industry's net worth.
  - b. Significant threat of a specific component filing bankruptcy.
  - c. Regulatory or legislative actions or both that have the potential to substantially impair specific component earnings.
  - d. Policy actions in the institutional investor community that, in aggregate, have the potential to have a deleterious effect on specific component share prices.
- 3. In the event that these or other indicators are evidenced, Staff or a member of the Committee may bring the matter before the Committee for due diligence and consideration. This due diligence will include:
  - a. Analysis by Staff, in consultation with third-party experts, that the indicators are evidenced and have the potential to adversely impact the benchmark performance.

- b. Analysis of the expected effect of the benchmark modification on the total portfolio risk/return characteristics.
- c. Analysis of the expected costs associated with implementation of the benchmark modification.
- d. A timetable for review of the benchmark modification.

#### C. Benchmark Modification Process

- 1. Staff is responsible for completing the Benchmark Change Control Form, obtaining the appropriate Senior Investment Officer approval, and submitting the form to the Performance Monitoring Unit ("PMU").
- 2. PMU Staff is responsible for reviewing the proposed purpose of the benchmark replacement or benchmark component modification.
- The General Pension Consultant is responsible for reviewing and approving the benchmark replacement or benchmark component modification.
- 4. The Chief Investment Officer ("CIO") or the COIO must also approve the benchmark replacement or benchmark component modification.
- 5. Once the General Pension Consultant and the CIO or COIO has approved the benchmark modification, PMU Staff will notify the Office of Enterprise Compliance, the Asset Allocation Unit and the Custodian.

#### VI. CALCULATIONS AND COMPUTATIONS

Investors, managers, consultants, and other participants selected by CalPERS shall make all calculations and computations on a market value basis as recorded by CalPERS Custodian.

#### VII. GLOSSARY OF TERMS

Key words used in the policy are defined in CalPERS Master Glossary of Terms.

Approved by the Policy Subcommittee:

Adopted by the Investment Committee:

August 17, 2009

Revised by the Policy Subcommittee:

Approved by the Investment Committee:

December 14, 2009

Revised by the Policy Subcommittee:	April 11, 2011
Approved by the Investment Committee:	May 16, 2011
Policy Effective:	July 1, 2011

#### **TOTAL FUND POLICY BENCHMARKS**

July 1, 2011 April 11, 2011

The total fund policy benchmark is the average return of the asset class benchmark indices, weighted by asset class benchmark allocations <u>plus the benchmark return of the total fund currency overlay program</u>. The fund benchmark return is the return attributable to the target asset class allocations. Staff employs active strategies in an effort to achieve a fund portfolio return that exceeds the fund benchmark return.

Asset Class	Benchmark	Weight
Alternative Investment Management (AIM)	CalPERS Custom Wilshire 2500 Index plus a 300 basis point risk premium on a one quarter lag basis.	14.0%
Cash	Custom Short Term Investment Fund.	2.0%
Global Equity	95% Blend of the Custom Global Equity Benchmark – composite of custom FTSE All World ex-U.S. and custom Wilshire 5000 and 5% of the RMARS T-bills plus 5% benchmark.	49.0%
Growth	78% * Public Equity benchmark + 22% * AIM benchmark	<u>63.0%</u>
Global Fixed Income	90% Barclays Long Liabilities and + 10% Barclays International Fixed Income.	<del>20</del> 16.0%
Inflation_Assets-Linked	Consumer Price Index + 4%75% * ILB benchmark + 25% * Commodities benchmark.	5 <u>4</u> .0%
Real <u>Assets</u> Estate	90% NCREIF Property Index + 2% and 10% FTSE EPRA NAREIT Global.77%  * Real Estate benchmark + 15% * Infrastructure benchmark + 8% * Forestland benchmark.	40 <u>13</u> .0%
Liquidity	75% * Barclays Treas 2-10 yr. + 25% * 1 mo. T-bill	4.0%

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#### **ATTACHMENT B**

## ASSET ALLOCATION POLICIES PROGRAM BENCHMARKS

Policy	Program	Benchmark
Affiliate Funds		The benchmark for each of the Affiliates' asset class investments is defined in the respective investment policy governing each pooled fund managed by CalPERS and approved by the Committee. The benchmark for each Affiliate, as a whole, shall be a weighted asset class benchmark based on asset class index returns weighted by the asset class policy targets.
Asset Allocation Strategy		Policy Index.
SIP CalPERS Risk-Based & Target Retirement Date Funds		The benchmark for each asset allocation fund is a weighted benchmark determined by weighting each asset class benchmark by its policy target.
	Global Equity	CalPERS Custom Global Equity Index Individual Global Equity pool portfolio benchmarks.
	U.S. Fixed Income	CalPERS Custom Fixed Income Index Barclays Capital Aggregate Index.
	TIPs	Barclays Capital TIPs Index Barclays Capital Global Real: U.S. TIPS Index.
	Commodities	Standard & Poor's GSCI Total Return Index.
	REITS	CalPERS Custom REITS Index FTSE EPRA/NAREIT Developed.

## ALTERNATIVE INVESTMENT MANAGEMENT (AIM) GROWTH POLICIES

#### **PROGRAM BENCHMARKS**

## July 1, 2011 April 11, 2011

Policy	Program	Benchmark
Growth	Total Growth	78% * Public Equity benchmark + 22% * AIM benchmark
Alternative Investment Management (AIM) Program	Total AIM	10-year rolling average for the total return of the CalPERS Custom Wilshire 2500 Index plus a 300 basis point risk premium on a one quarter lag basis(67% FTSE U.S. TMI + 33% FTSE AW ex U.S. TMI) +3% lagged one quarter.
Restricting AIM Investments in Public Sector Outsourcers		Not Applicable.

#### **ATTACHMENT D**

## GLOBAL EQUITY POLICIES PROGRAM BENCHMARKS AND DETAILS

### **December 14, 2009**

Policy Policy	<del>Program</del>	<del>Benchmark</del>
Global Public Equity	Total Global Public Equity	95% Blend of the Custom Global Equity Benchmark — composite of custom FTSE All World ex-U.S. and custom Wilshire 5000 and 5% of the RMARS T-bills plus 5% benchmark CalPERS Custom Global Equity.
Global Public Equity Sub Asset Class Allocation Ranges	Domestic Equity	CalPERS Custom Wilshire 2500 Index Domestic All Cap.
	International Equity	CalPERS <del>FTSE</del> All-World Ex U.S. <u>All Cap.</u>
Global <u>Public</u> Equity Emerging Manager Fund of Funds		Custom weighted average benchmark.
Corporate Governance Program	Corporate Governance (Externally Managed) Funds	The benchmark shall be recommended by the fund manager with input from the due diligence consultant and input and approval from the Corporate Governance Senior Portfolio Manager and Portfolio Manager.

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	Corporate Governance Co- Investment Strategy	The benchmark is the portfolio market value weighted total return for the benchmark for each external partner with whom an actual co-investment has been made.
Emerging Equity Markets Principles		Not Applicable.
Externally Managed Strategies	Domestic Active Equity	CalPERS Custom Domestic Large / Mid Cap.
	Domestic Enhanced Indexing Equity	CalPERS Custom Domestic Large / Mid Cap.
	Domestic Relaxed Long- Only Equity	CalPERS Custom Domestic Large / Mid Cap.
	International Active Equity	CalPERS Custom Developed International Large / Mid Cap.
	International Enhanced Indexing Equity	CalPERS Custom Developed International Large / Mid Cap.
Manager Development Program (MDP) I and II Policy and Manager Transition Policy		Custom weighted average benchmark.
Monitoring Externally Managed Portfolios		Specific performance objectives and benchmarks for each externally managed program are outlined in policy and External Manager guidelines.
Internally Managed Affiliate Equity Index Funds	Deferred Compensation Index (SIP Large Cap Equity Index)	Standard & Poor's 500.
	Pooled Index	Standard & Poor's 500Ex Tobacco.
	Deferred Compensation Small and Mid Cap Index (SIP Small and Mid Cap Equity Index)	Russell 2500 Index.
Internally Managed Global Public Enhanced Equity Strategies	Fundamental Factor Model  – Domestic	CalPERS Custom Domestic Large / Mid Cap.
	Fundamental Factor Model  – Developed Markets - International	CalPERS Custom Developed International Large / Mid Cap.

	Environmental Factor Model – HSBC	CalPERS /Custom Global Equity
	Fundamental Factor Model  – Emerging Markets – International	CalPERS Custom Emerging Markets.
	Country-Tiered Emerging Markets	CalPERS Custom Emerging Markets
	Synthetic Enhanced Equity	Standard & Poor's 500 Index.
Internally Managed Global Public Equity Index Funds	Domestic <u>Large / Mid Cap</u>	CalPERS Custom Domestic Large / Mid Cap.
	Domestic Microcap	CalPERS Custom Domestic Microcap.
	International <u>Large / Mid</u> <u>Cap</u>	CalPERS Custom Developed International Large / Mid Cap.
	International Small/Microcap	CalPERS Custom Developed International Small Cap.
	Emerging Markets	CalPERS Custom Emerging Markets.
	Cash Equitization	CalPERS Custom Global Equity
	Dynamic Completion	CalPERS Custom DCF.
Risk Managed Absolute Return Strategies		Due to the wide range of markets in which the Program's investments shall be made, appropriate benchmarks shall be established for each specific Absolute Return Fund. Each fund's benchmark shall reflect the investment opportunity set or risk profile of the specific fund 1 yr Treasury Note + 5%.

#### **BENCHMARK DETAILS:**

### **CalPERS Custom Global Equity**

The CalPERS Custom Global Equity benchmark is a custom composite that comprises the CalPERS Custom Domestic All Cap and CalPERS Custom All-World ex US All Cap benchmarks on a cap weighted basis.

### **CalPERS Custom Domestic All Cap**

The CalPERS Custom Domestic All Cap benchmark is a custom composite that comprises the CalPERS Custom Domestic Large / Mid Cap and CalPERS Custom Domestic Microcap benchmarks on a cap weighted basis.

#### CalPERS Custom All-World ex US All Cap

The CalPERS Custom All-World ex US Cap benchmark is a custom composite that comprises the CalPERS Custom Developed International Large / Mid Cap, CalPERS Custom Developed International Small Cap, CalPERS Custom emerging Markets Large / Mid Cap, and CalPERS Custom Emerging Markets Small Cap benchmarks on a cap weighted basis.

#### CalPERS Custom Developed International Large / Mid Cap

The CalPERS Custom Developed International Large / Mid Cap benchmark is a custom index constructed and maintained by FTSE. It is defined as the FTSE All World Developed benchmark excluding US domestic and tobacco (as defined by RiskMetrics) securities. It is based on market capitalization and is reconstituted quarterly.

#### **CalPERS Custom Developed International Small Cap**

The CalPERS Custom Developed International Small Cap benchmark is a custom index constructed and maintained by FTSE. It is defined as the FTSE GEIS (Global Equity Index Series) Developed Small Cap benchmark excluding US domestic and tobacco (as defined by RiskMetrics) securities. It is based on market capitalization and is reconstituted quarterly.

### CalPERS Custom Domestic Large / Mid Cap

The CalPERS Custom Domestic Large / Mid Cap benchmark is a custom index constructed and maintained by Wilshire Associates FTSE. It is defined as the top 25003000 securities in the Wilshire 5000 FTSE US Total Market Index (TMI) index, excluding tobacco securities (as defined by RiskMetrics), based on market capitalization and is reconstituted annually quarterly.

#### **CalPERS Custom Domestic Microcap**

The CalPERS Custom Domestic Microcap benchmark is a custom index constructed and maintained by Wilshire Associates FTSE. It is defined as the Wilshire 5000 index FTSE US TMI, excluding tobacco securities (as defined by RiskMetrics), less the securities included in the CalPERS Custom Domestic Large / Mid Cap benchmark. It is based on market capitalization and is reconstituted annually guarterly.

#### **CalPERS Custom DCF**

The CalPERS Custom DCF (Dynamic Completion Fund) benchmark is a custom index constructed and maintained by Nuveen Investment Solutions (formerly Richards and Tierney). Its construction is a function of the style and market cap biases generated by the composite of the benchmarks for all Global Equity portfolios in the aggregate. This custom index complements the above-mentioned biases, completing the benchmark exposure to CalPERS strategic, custom, Global Equity benchmark, and is reconstituted as needed based on changes in the Global Equity program.

#### CalPERS Custom Emerging Markets Large / Mid Cap

The CalPERS Custom Emerging Markets <u>Large / Mid Cap</u> benchmark is a custom index constructed and maintained by FTSE. It is defined as the FTSE All World Emerging markets <u>Large / Mid Cap</u> benchmark excluding tobacco (as defined by RiskMetrics) securities, KLD-restricted securities, and Argentine securities. It is based on market capitalization and is reconstituted quarterly.

#### **CalPERS Custom Emerging Markets Small Cap**

The CalPERS Custom Emerging markets Small Cap benchmark is a custom index constructed and maintained by FTSE. It is defined as the FTSE All World Emerging markets small cap benchmark excluding tobacco (as defined by RiskMetrics) securities. KLD-restricted securities, and Argentine securities. It is based on market capitalization and is reconstituted quarterly.

#### Russell 2500

The Russell 2500 benchmark is a cap weighted benchmark designed to measure the performance of the US domestic small and mid cap equity market. It is composed of the largest 3000 securities, based on market capitalization, in the United States minus the largest 500 securities, and is reconstituted annually.

#### Standard & Poor's 500

The Standard & Poor's 500 benchmark is a cap weighted benchmark designed to measure the performance of the US domestic large cap equity market. It is composed of the largest 500 securities, based on market capitalization, in the United States and is reconstituted quarterly.

#### Standard & Poor's 500 Ex Tobacco

The Standard & Poor's 500 Ex Tobacco benchmark is a cap weighted benchmark designed to measure the performance of the US domestic large cap equity market. It is composed of the largest 500 securities, excluding tobacco securities (as defined by RiskMetrics), based on market capitalization, in the United States and is reconstituted quarterly.

## ATTACHMENT <u>E</u><u>D</u>

## GLOBAL FIXED INCOME POLICIES PROGRAM BENCHMARKS

Policy	Program	Benchmark
Currency Overlay	Currency Overlay Program	Sum of benchmark foreign currency exposures of portfolios with international benchmarks plus actual foreign currency exposures of portfolios with domestic-only benchmarks fully hedged.
	Tactical Management Program	Sum of benchmark foreign currency exposures of portfolios with international benchmarks plus actual foreign currency exposures of portfolios with domestic-only benchmarks <u>fully hedged</u> .
	Externally Managed Currency Overlay Program	Sum of benchmark foreign currency exposures of portfolios with international benchmarks plus actual foreign currency exposures of portfolios with domestic-only benchmarks <u>fully hedged</u> .
	Internally Managed Passive Currency Overlay Program	Sum of benchmark foreign currency exposures of portfolios with international benchmarks plus actual foreign currency exposures of portfolios with domestic-only benchmarks fully hedged.
	Internally Managed Active Currency Overlay Program	Sum of benchmark foreign currency exposures of portfolios with international benchmarks plus actual foreign currency exposures of portfolios with domestic-only benchmarks <u>fully hedged</u> .
Global Fixed Income Program	Dollar-Denominated Fixed Income Program	Barclays Capital Long Liabilities Index.
	Externally Managed Active International Fixed-Income	Barclays Capital International Fixed Income Index.

	Program	
Global Fixed Income Program	Foreign Debt Policy Program	Not Applicable.
Low Duration Fixed Income Program	Dollar-Denominated Fixed Income High Quality Libor (HQL) Program	Federal Funds based index.
	Dollar-Denominated Fixed Income Short Duration Program	Federal Funds based index.
	Internally Managed Dollar- Denominated Short-Term Program	Total rate of return of the State Street Bank Short-Term Investment Fund after investment management fees.
Treasury Inflation Protected Securities (TIPS)		Barclays Capital Global Real: U.S. TIPS Index.

## ATTACHMENT FE

# INFLATION ASSETS - LINKED POLICIES PROGRAM BENCHMARKS

## <u>July 1, 2011</u>April 11, 2011

Policy	Program	Benchmark
Inflation <u>Assets</u> -Linked Asset Class	Overall Program	Consumer Price Index + 4%75%  * ILB benchmark + 25% * Commodities benchmark.
	Commodities Program	Standard & Poor's GSCI Total Return Index.
	Inflation-Linked Bond Program	ILB Custom Index: Blend of 6667.7% Barclays Capital Global Inflation-Linked U.S. and 33% Barclays Capital Global Inflation-
		Linked FR, DE, IT, JP, GB United Kingdom, France, Italy, Germany and Canada only, unhedged.
	Foreign Debt Policy	Not Applicable.
	Infrastructure Program	Consumer Price Index + 5%, net of fees over rolling five years.
	Forestland Program	Consumer Price Index + 5%.

#### ATTACHMENT GE

## REAL ESTATE POLICIES PROGRAM BENCHMARKS

Policy	Program	Benchmark
Real <u>Assets</u> Estate	Total Real	77% * Real Estate benchmark + 15% * Infrastructure benchmark + 8% * Forestland benchmark.
	Real Estate Program*	Exceed (before fees) a blend of the-NCREIF ODCE lagged one quarter Index and the FTSE EPRA NAREIT Global Net Total Return Real Estate Index. The overall benchmark shall be 90% weighted to NCREIF Index + 200 basis points and 10% weighted to FTSE EPRA NAREIT Global Net Total Return Real Estate Index.
	Infrastructure Program	Consumer Price Index +54%, net of fees over rolling 5 years lagged one quarter.
	Forestland Program	Consumer Price Index +5%, net of fees over rolling 5 years NCREIF Timberland lagged one quarter.

<sup>\*</sup> The proposed interim Real Estate benchmark is a composite of the NCREIF ODCE and the previous global equity REIT index (FTSE EPRA NAREIT Global). Each quarter, the benchmark weight of the REIT index weight would equal the actual weight of the REIT portfolio at the end of the prior quarter. The portfolio REIT allocation, 7%, as of April 2011 is expected to decline to zero over the next one to three years. This transition plan is gradual and responsive to market conditions.

## **ATTACHMENT G**

# LIQUIDITY POLICIES PROGRAM BENCHMARKS

Policy	Program	Benchmark
<u>Liquidity Program</u>	Total Liquidity Program	75% * Barclays Treas 2-10 yr. + 25% * 1 mo. T-bill

#### **ATTACHMENT H**

# INVESTMENT AND RISK MANAGEMENT POLICIES PROGRAM BENCHMARKS

August 17, 2009April 11, 2011

Policy	<b>Program</b>	<b>Benchmark</b>
Credit Enhancement Program		Not Applicable.
Development of Derivatives Strategies		Not Applicable.
<del>Derivatives – External Money</del> <del>Managers</del>		Not Applicable.
Developmental Investment Fund		No specific benchmark for the entire Fund.
Divestment		Benchmarks are provided in the existing policies for the Targeted Investments.
Leverage		Not Applicable.
Risk Management		The Program shall be benchmarked against the risk management practices of other major pension fund peers.
Securities Lending		Not Applicable.

## ATTACHMENT H

# OTHER (NON-PERF) INVESTMENT PORTFOLIO POLICIES PROGRAM BENCHMARKS

Policy	Program	Benchmark
Barclays Aggregate Program		Barclays Capital Aggregate Index.
Supplemental Income Plans (SIP)		The performance of each individual investment fund within SIP will be evaluated against its appropriate asset class benchmark.
Treasury Inflation Protected Securities (TIPS)		Barclays Capital Global Real: U.S. TIPS Index.

## **Quarterly Benchmark Modifications Update – March 2011**

Approval Date	Program	Original Benchmark	New Benchmark	Benchmark Action	Effective Date	Portfolios/Composites Impacted
January 2011	Global Equity	Total Global Equity ex AIM	CalPERS Custom FTSE All World	Benchmark Replacement	Inception Date (July 2010)	Internal Global Environmental Strategy HSBC CI Portfolio
March 2011	Global Equity	CalPERS FTSE All EM ex KLD, Sudan, Tobacco, Net	CalPERS FTSE All EM ex KLD, Sudan, Tobacco, Net	Modified Benchmark Components (Russian GDR from Local	March 2011	Internal Emerging Market Index Portfolio Internal Structured Emerging Market Portfolio Internal Fundamental Emerging Market Portfolio
March 2011	Global Equity	CalPERS Custom S&P 500	CalPERS FTSE US TMI 1000	Benchmark Replacement	April 2011	Markston Large Core Portfolio Piedmont Strategic Core Portfolio
March 2011	Global Equity	CalPERS Custom Russell 2000	CalPERS FTSE US TMI 2000	Benchmark Replacement	April 2011	TIS Small Cap Portfolio Quotient Small Core Portfolio CWC Portfolio
March 2011	Global Equity	CalPERS Custom Russell 2000 Value	CalPERS FTSE US TMI 2000 Value	Benchmark Replacement	April 2011	Lombardia Portfolio Windsor - LEIA Portfolio GW Capital Portfolio Phocas Portfolio Hubert Portfolio Channing Portfolio

## **Quarterly Benchmark Modifications Update Continued – March 2011**

Approval Date	Program	Original Benchmark	New Benchmark	Benchmark Action	Effective Date	Portfolios/Composites Impacted
March 2011	Global Equity	CalPERS Custom Russell 2000 Growth	CalPERS FTSE US TMI 2000 Growth	Benchmark Replacement	April 2011	Independence Portfolio Nicholas Small Growth Portfolio Mindshare Portfolio Riverbridge Portfolio Nicholas Portfolio OMT Portfolio CUPPS Portfolio AH Lisanti Portfolio
March 2011	Global Equity	CalPERS Custom Russell 1000 Growth	CalPERS FTSE US TMI 1000 Growth	Benchmark Replacement	April 2011	Redwood Large Growth Portfolio  Mastrapasqua Large Growth Portfolio  Logan Large Growth Portfolio  Redwood Large Growth – LEIA Portfolio
March 2011	Global Equity	CalPERS Custom Russell 1000	CalPERS FTSE US TMI 1000	Benchmark Replacement	April 2011	Stux Investments Portfolio  Quotient Large Core Portfolio
March 2011	Global Equity	CalPERS Custom Russell 1000 Value	CalPERS FTSE US TMI 1000 Value	Benchmark Replacement	April 2011	Herndon Large Value Portfolio